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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
JUNG, MIN	

ART UNIT	PAPER NUMBER
2663	

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/696,769	SHPAK, ERAN	
	Examiner	Art Unit	
	Min Jung	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 February 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,16-26,28-41 and 7014* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *17* is/are allowed.

6)☒ Claim(s) *1-5,7,8,14,16,18-24,26,28 and 30-36* is/are rejected.

7)☒ Claim(s) *9-13,25,29 and 37-41* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2-17-05 and 5-19-0*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-5, 7-8, and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis, US 6,259,898.

Lewis discloses an access point for use in a wireless local area network.

Regarding claims 1 and 3, Lewis teaches an access point (access point 19) comprising: a plurality of wireless communication units (transceivers 36A and 36b), which are adapted to exchange data with mobile stations by transmitting and receiving signals over the air on different, respective frequency channels of the WLAN (col. 5, lines 26-45); and a physical layer interface, which is adapted to be coupled to a communication medium (physical layer interface may read on the Tx 40 and Rcv 38, with or without the microprocessor 44, or it may read on the access point 32) so as to connect the plurality of wireless communication units to communicate with a hub (Client Server 23b) over a single physical link of the communication medium (LAN 15 including backbone 17). See Figs. 1 and 2, and col. 5, lines 26-45.

Lewis fails to specifically teach a multiplexer for selectively conveying data from the mobile terminal to the physical layer interface (access point 32). However, it is clear from Lewis' teaching that there are at least two wireless communication units (36a and

36b), which respectively transmit and receive data on separate data channels. These data channels are conveyed to the access point 32 for transmission over the system backbone 17. Therefore, Lewis requires some kind of mechanism to selectively convey data on two channels to the backbone. It would have been obvious for one of ordinary skill in the art at the time of the invention to implement the idea of selectively conveying data by providing a multiplexer because multiplexer is well known in the field of the invention to perform exactly that function.

Regarding claim 2, Lewis further discusses the utilization of IEEE 802.11 specification in a conventional system. See col. 9, lines 53-55.

Regarding claim 4, Lewis fails to specifically teach that the physical layer interface is adapted to transmit and receive data frames in accordance with an Ethernet physical layer specification. However, Ethernet is a well-known and most widely used communication specification, and therefore, is readily available to be adopted in any communication environment. Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to employ Ethernet scheme when making the wireless network of Lewis to provide necessary specification for the practical application.

Regarding claim 5, the LAN 15 of Lewis can be considered as a distribution system medium since data are distributed/collected using the LAN 15.

Regarding claim 7, "demultiplexer" is a counterpart of "multiplexer", and they are usually used together for duplex communication. Therefore, the same reasoning as above for claim 1 applies.

Regarding claim 8, Lewis further fails to specifically teach that control messages are conveyed in addition to data. However, it is well known that when a communication network is set up, it is set up to convey control messages as well as data messages, a well known kind of which may be call initiation message, pilot signal, sync signal, etc. Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to provide the well known feature of conveying control messages in order to make the system fully functional.

Regarding claims 22-24, Lewis further fails to teach a multiplexer for selectively conveying data from the mobile terminal to the physical layer interface (access point 32). However, it is clear from Lewis' teaching that there are at least two wireless communication units (36a and 36b), which respectively transmit and receive data on separate data channels. These data channels are conveyed to the access point 32 for transmission over the system backbone 17. Therefore, Lewis requires some kind of mechanism to selectively convey data on two channels to the backbone. It would have been obvious for one of ordinary skill in the art at the time of the invention to implement the idea of selectively conveying data by providing a multiplexer because multiplexer is well known in the field of the invention to perform exactly that function. Further regarding claims 23 and 24, the same reasoning as applied above for claims 7 and 8 applies.

3. Claims 14, 16, 18-21, 26, 28, 30-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis in view of Taylor, US 6,196,456.

Regarding claims 14 and 19, Lewis teaches a system for mobile communication comprising: a hub (Client Server 23b); a communication medium (LAN 15), coupled to the hub; and a plurality of access points (Access Points 19), each of which comprises: two or more wireless communication units (transceivers 36a and 36b), which are adapted to exchange data with mobile stations by transmitting and receiving signals over the air on different, respective frequency channels of a wireless local area network (col. 5, lines 26-45); and a single physical layer interface (access point 32 and/or processor 30), coupled to the communication medium, so as to connect the two or more wireless communication units to communicate with the hub over the communication medium. See col. 5, lines 26-45. Lewis fails to teach a plurality of links coupled to the hub. Taylor shows a classic star type of configuration associated with a hub. See Fig. 1. As shown by Taylor, it is well known to provide a plurality of links coupled to a hub for connecting a plurality of communication devices. Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to implement the wireless network of Lewis by adopting the well known star configuration as taught by Taylor for connecting access points to a hub by utilizing a single link for each respective access point.

Regarding claim 16, Lewis teaches that the access points have respective service areas and are arranged so that at least some of the service areas substantially overlap. See col. 3, lines 52-60. Also, it is inherent that coverage areas overlap in some regions.

Regarding claim 18, Lewis discusses the utilization of IEEE 802.11 specification in a conventional system. See col. 9, lines 53-55.

Regarding claim 20, Lewis fails to specifically teach that the physical layer interface is adapted to transmit and receive data frames in accordance with an Ethernet physical layer specification. However, Ethernet is a well-known and most widely used communication specification, and therefore, is readily available to be adopted in any communication environment. Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to employ Ethernet scheme when making the wireless network of Lewis to provide necessary specification for the practical application.

Regarding claim 21, the LAN 15 of Lewis can be considered as a distribution system medium since data are distributed/collected using the LAN 15.

Claims 26, 28 and 30-33 are method claims which closely trace the apparatus claims of 14, 16, and 18-21. Therefore, the same reasoning as above applies.

Regarding claim 34, Lewis and Taylor further fails to teach a multiplexer for selectively conveying data from the mobile terminal to the physical layer interface (access point 32). However, it is clear from Lewis' teaching that there are at least two wireless communication units (36a and 36b) which respectively transmit and receive data on separate data channels. These data channels are conveyed to the access point 32 for transmission over the system backbone 17. Therefore, Lewis requires some kind of mechanism to selectively convey data on two channels to the backbone. It would have been obvious for one of ordinary skill in the art at the time of the invention to

implement the idea of selectively conveying data by providing a multiplexer because multiplexer is well known in the field of the invention to perform exactly that function. Further regarding claims 35 and 36, the same reasoning as applied above for claims 7 and 8 applies.

Allowable Subject Matter

4. Claims 9-13, 25, 29, 37-41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claim 17 is allowed.

Response to Arguments

6. Applicant's arguments with respect to claims 1-5, 7-14, 16-26, and 28-41 have been considered but are moot in view of the new ground(s) of rejection.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Min Jung whose telephone number is 571-272-3127. The examiner can normally be reached on Monday, Thursday, Friday 7:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJ
July 8, 2005

Min Jung
Primary Examiner